

Appl. No. 09/937,912

Amendment dated May 10, 2005

Reply to Non-Final Office Action of February 11, 2005

**REMARKS****A. Rejection of Claims Under 35 U.S.C. Section 103(a)**

The Examiner has rejected the pending claims 14, 16-17, 19-28 and 31-32 as being unpatentable under 35 U.S.C. Section 103(a).

**1. Rejection of claims 14, 16-17, 19-28 and 31-32 as being unpatentable under 35 U.S.C. Section 103 over United States Patent No. 5,843,193 to Hawkins et al., in view of United States Patent No. 5,494,489 to Akram et al.**

The Examiner's reasons for rejection are as follows:

Hawkins (US '193) teaches a hair dyeing composition comprising cationic conditioning agent of quaternary ammonium salts as claimed in claims 14, 17 and 27 (see col. 9, lines 50-67 and col. 10, lines 1-14), dye precursors as claimed in claims 14 and 23 (primary intermediates) (see col. 2, lines 17-67), anionic tensides (anionic surfactants) of water soluble soaps as claimed in claim 16 (see col. 7, line 9), cationic polymers of quaternary derivative of cellulose as claimed in claim 19 (see col. 10, lines 56-60), silicone fluids (oil) as claimed in claim 22 (see col. 12, line 21) and hydrolyzed protein as claimed in claim 21 (see col. 14, Example 1). Hawkins also teaches a method for dyeing hair comprising applying to the hair the dyeing composition as described above, wherein the method is similar to the claimed method as claimed in claims 28 and 31-32 (see col. 14, lines 1-23).

The instant claims differ from the reference by reciting a composition comprising quaternary ammonium phospholipids compounds of the claimed formula (I) in which R represents the claimed formula (II).

However, the primary reference teaches a dyeing composition that comprises cationic conditioning such as polyquaternium 10 and quaternary ammonium salts (see col. 10, lines 56-65).

Akram (US '489) in analogous art of hair dyeing composition, teaches a composition comprising tris(3-N,N-dimethyl-N-linolenamidopropyl-2-hydroxyammoniumpropyl) phosphoric acid ester-trichloride (Phospholipids EFA) (described in U.S. Pat. No. 4,209,449 incorporated herein by reference, whereas the reference's compound may be represented by a formula similar [to] the claimed formula (I), when in the claimed formula (I), Y is O, A is oxy-2-hydroxypropyl (-O-CH<sub>2</sub>-CHOH-CH<sub>2</sub>-) and R<sup>3</sup> is monounsaturated C<sub>6</sub> to C<sub>18</sub> acyl radical and when in the reference the compound of tris(3-N,N-dimethyl-N-linolenamidopropyl-2-hydroxyammoniumpropyl)phosphoric acid ester-trichloride (Phospholipids EFA) represents 2-hydroxypropyl radical attached from one side

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to a quaternary ammonium radical carrying two methyl radicals and a tertiary amine radical having monounsaturated C<sub>18</sub> acyl radical to form a linolenamide group and attached from [the] other side to a phosphoric radical which represents the claimed compound linoleamidopropyl PG-Dimonium chloride phosphate ((Phospholipids EFA) as claimed in claims 26 and 31 (see col. 3, lines 61-64)

Therefore, in view of the teaching of the secondary reference, one having ordinary skill in the art at the time the invention was made would be motivated to modify the composition of the primary reference by incorporating the tris (3-N,N-dimethyl-N-linolenamidopropyl-2-hydroxyammoniumpropyl) phosphoric acid ester-trichloride (Phospholipids EFA) as taught by Akram to make such a composition with a reasonable expectation of success. Such modification would be obvious because the primary reference suggests the [use] of the cationic conditioning of a polymeric quaternary ammonium [salt] (see col. 10, lines 56-64) and the secondary reference teaches clearly that the use of Phospholipids compounds in the hair colorant composition succeeds in achieving an improvement in the area of wet-combing behavior by 48% (see col. 4, lines 48-53), and, thus, a person of the ordinary skill in the art would be motivated to incorporate the phospholipids compounds in the hair dyeing composition in order to improve the wet-combing behavior, absent, unexpected results.

With respect to claim 20 it would have been obvious to one having ordinary skill in the art at the time the invention was made to make such a composition by incorporating the cationic polymer of polyquaternium-2 in the composition of the primary reference because the primary reference teaches a hair dyeing composition comprising a cationic polymer of polyquaternium-10 as a cationic conditioning agent (see col. 10, line 62), and thus, a person of an ordinary skill in the art would expect such a composition to have similar properties to those claimed, absent unexpected results.

The Hawkins (US `193) patent is directed to a composition and method for oxidative dyeing of hair. The composition comprises (by weight of the total composition):

0.0001-20% of at least one primary intermediate and at least one coupler for the formation of oxidation dyes,

0.01-10% of a 2-hydroxyphenyl benzotriazole compound which absorbs ultraviolet radiation in the wavelength range of 200 to 400 nanometers,

0.5-20% surfactant, and

10-65% water.

The Hawkins (US `193) patent is further directed to a two component kit containing the hair dye composition and a developer. (Abstract of US `193)

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Hence, the Hawkins (US `193) patent does not disclose as essential components in the Hawkins composition Applicants' claimed composition, comprising Component (a) of "at least one tenside of Formula (I)" and Component (b) of "at least one conditioning component comprising a cationic polymer." Indeed, the only relevant passage in the Hawkins (US `193) patent to the use in such composition is to a cationic conditioning agent as a possible additive. That reference is in the following passage quoted from column 9, lines 46-51:

In addition, the compositions of the invention may contain a number of other ingredients. Preferably the compositions of the invention comprise 0.01-15%, preferably 0.05-10%, preferably 0.10-8% of a cationic conditioning agent which is a cationic polymer, a quaternary ammonium salt or the salt of a fatty amine.

The Akram (US `489) patent discloses that improved wet combability of hair is achieved by aqueous dyeing composition for keratin fibers, including human hair. The aqueous dyeing composition is based on oxidation dye precursors, which are mixed immediately before application with a peroxide-containing composition to form a total composition. The composition also comprises at least one developer substance and at least one coupler substance and tris(3-N,N-dimethyl-N-linolenamidopropyl-2-hydroxyammoniumpropyl)phosphoric acid ester-trichloride.

Akram summarizes the effect of adding the last-referenced compound as avoiding the need of the customary after-treatment with a conditioning agent or a conditioning step as a separate after treatment. (See column 3, lines 51-60).

The Examiner has argued that the use of the last-referenced compound appears from the Akram (US `489) patent to solve the problem of improved wet combability of hair reduction to damage to hair citing a passage at column 4, lines 48-53. The relevant passage, including the portion cited by the Examiner, is at column 4, lines 48-58 and reads as follows:

The above investigations show that the addition according to the invention of tris(3-N,N-dimethyl-N-linolenamidopropyl-2-hydroxyammoniumpropyl)phosphoric acid estertrichloride to the colorant

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surprisingly succeeds in achieving an improvement in the area of wet-combing behavior during the use of this oxidative hair colorant by 48%. The result of the hair strands treated as in C, shows that the wet-combing behavior cannot be improved by aftertreatment with a 1% strength solution of tris(3-N,N-dimethyl-N-linolenamidopropyl-2-hydroxyammoniumpropyl)phosphoric acid ester-trichloride, *which corresponds to the method of treatment of a conditioning agent.* (emphasis added)

Hence, Akram discloses in the quoted passage and at column 3, lines 51-60 that the use of the formula (I) compound similar to component (a) of Applicants' claimed composition *corresponds to the method of treatment of a conditioning agent.* That is, treatment with the formula I composition *replaces* treatment with a conditioning agent. Thus, one of ordinary skill in the art combining the disclosures of the Hawkins (US `193) and Akram (US `489) patents would be taught by Akram (US `489) to replace the Hawkins conditioning additive with the Akram compound. Accordingly, the Akram (US `489) patent teaches away from forming Applicants' combination of the formula I compound with the cationic conditioning agent disclosed in Hawkins because of the objective set forth in the Akram (US `489) patent to replace the use of a conditioning agent with the Akram formula I compound. Therefore, one of ordinary skill in the art would have no motivation to combine the Hawkins (US `193) conditioning agent and Akram (US `489) formula I compound in order to obtain Applicants' claimed compositions. *Alco Standard Corp. v. Tennessee Valley Authority*, 808 F.2d 1490, 1498, 1 USPQ2d 1337, 1343 (Fed. Cir. 1986), cert. dismissed, 483 U.S. 1052 (1987) ("the question is not simply whether the prior art 'teaches' the particular element of the invention, but whether it would 'suggest the desirability, and thus the obviousness, of making the combination.'") Accordingly, a rejection of claims 14, 16-17, 19-28 and 31-32 as being unpatentable under 35 U.S.C. 103(a) over Hawkins (US `193) in view of Akram (US `489) is untenable and should be withdrawn.

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**2.Rejection of Claims 24 and 25 Under 35 U.S.C. Section 103(a) as being unpatentable over Hawkins (US '193) in view of Akram (US '489) and further in view of U.S. Patent No. 5,580,357 to Cotteret et al.**

The Examiner's reasons for this rejection are as follows:

The disclosures of Hawkins (US '193) and Akram (US '489) are summarized above. The references do not teach or disclose at least one indole derivatives or indoline derivatives as claimed in claim 24. The references also do not teach at least one substantive dye or natural dye as claimed in claim 25.

However, the primary reference of Hawkins (US '193) teaches a dyeing composition...that may comprise a number of dyeing ingredients (primary intermediates and couplers) (see col. 2, lines 21-67 and col. 3, lines 10-55) and the secondary reference of Akram (US '489) teaches a colorant composition comprising one or more developers, one or more couplers and direct absorbing dyes (see col. 2, lines 11-12 and lines 15-27).

Cotteret (US '357) in other analogous art of hair dyeing composition teaches a composition comprising indole derivatives as claimed in claim 24 (see col. 4, line 5) and substantive dyes such as azo or anthroquinone dyes as claimed in claim 25 (see col. 4, lines 8-9).

Therefore, in view of the teaching of the secondary reference, one having ordinary skill in the art at the time the invention was made to be motivated to modify the composition of the primary reference by incorporating the indole derivatives and the substantive dyes as taught by Cotteret to make such a composition with a reasonable expectation of success. Such modification would be obvious because the reference of Cotteret teaches that other coupling agents (indole derivatives) and/or direct dyes (substantive dyes) are used in the composition in particular to tinting or enriching with glints the colors provided by the oxidation dye precursors (see col. 3, lines 63-67), and thus a person of the ordinary skill in the art would be motivated to incorporate these dyeing ingredients of indole derivatives and/or substantive dyes in the hair dyeing composition in order to enrich the color with glints, and would expect such a composition to have similar properties to those claimed, absent unexpected results.

Cotteret (US '357) does not disclose Applicants' claimed composition "for coloring keratin fibers comprising (a) at least one tenside of formula (I);" and "(b) at least one conditioning component comprising a cationic polymer." Accordingly, for the reasons set forth with regard to the previous rejection, a rejection of claims 24 and 25 under 35 U.S.C. 103(a) as

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unpatentable over Hawkins (US '193) and Akram (US '489) in view  
of Cotteret (US '357) is untenable and should be withdrawn.

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**B. Submission of Data Showing the Unexpected Advantages in Hair Care Treatment Accomplished by the Combination of Applicants' Claimed Components (a) and (b)**

Page 2, lines 19-23 of the application describe the unexpected advantages of Applicants' claimed compositions as follows:

Surprisingly, it has now been found that a combination of certain cationic tensides with further conditioning substances do not have the abovementioned disadvantages and at the same time improve the feel, wet combability and the shine of the treated hair.

As stated above, the prior art cited by the Examiner does not disclose a combination of Components (a) and (b) of Applicants' claimed composition. Accordingly, the prior art does not disclose the unexpected advantages of the composition combining Components (a) and (b) over a composition consisting of Component (a) or (b) alone.

In support of Applicants' position, Applicant submits as Exhibit A a Declaration under 37 C.F.R. Section 132 of one of the co-inventors, Dr. Mustafa Akram.

As set forth in the Declaration, under Dr. Akram's direction, control dye formulations show the synergistic effect resulting from the combination of a cationic polymer (i.e., Component (b)) with the tensides of Formula (I) (i.e., Component (a)). The dye formulation comprising Components (a) and (b) were compared with the same dye formulations comprising Component (a) alone and Component (b) alone. With each of the two comparative formulations and the inventive formulation, four specialists in the art of hair treatments judged the dry and wet behavior of both sides of the head of each of three test subjects in terms of (1) wet combability, (2) wet grip (3) dry combability and (4) dry grip in a blind test.

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Dr. Akram's Declaration reports that the composition of the invention identified as "Inventive Composition C," was superior to the comparative compositions (A and B) in all four of these tests. More specifically, compared with the composition bearing 1% of Formula (I) only (comparative composition A), the composition according to the invention was judged as being slightly better in all four tests. Compared with the composition having 1% of Component (b) only, (comparative composition B), the composition of the invention was judged as being clearly better in all four tests. Accordingly, the Declaration under 37 C.F.R. Section 132 of Dr. Akram supports Applicants' position that Applicants' claimed composition comprising a combination of Components (a) and (b) of Applicants' claimed composition exhibited superior properties in hair care than the compositions of the prior art containing Component (a) alone or a composition containing Component (b) alone. Thus, the results reported in Dr. Akram's Declaration support the non-obviousness of Applicants' claimed composition over the compositions of the prior art.

**C. Amendment of Independent Claims 14 and 28**

Applicants have amended claims 14 and 28 to delete component (d), "at least one anionic tenside." In the Section of the Action entitled "Response to Applicants' Arguments," the Examiner noted that "the combined references teach and disclose dyeing compositions comprising cationic polymers and anionic surfactants which are similar to those claimed. . . ." As Applicants are not relying on component (d) to demonstrate Applicants' claimed composition (and method) as unobvious over the prior art, Applicants have deleted it from claims 14 and 28.



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#### IV. CONCLUSION

In view of the amendments and remarks above, Applicants ask for reconsideration and allowance of all pending claims. Should any fees be due for entry and consideration of this Amendment that have not been accounted for, the Commissioner is authorized to charge them to Deposit Account No. 01-1250.

Respectfully submitted,



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